

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of processing a spectrally-encoded digital audio signal comprising band data components representing audio contributions in respective frequency bands, said method comprising:

altering a subset comprising one or more of said band data components by combining or replacing one or more of said band data components with corresponding band data components from a spectrally-encoded digital audio watermark signal, multiplied by a scaling factor, to produce a band-altered digital audio signal having altered band data components;

generating recovery data to allow original values of said altered band data components to be reconstructed; and

storing results of the altering in a physical memory unit.

Claim 2 (Previously Presented): A method according to claim 1, further comprising encrypting said recovery data.

Claim 3 (Original): A method according to claim 1, in which said recovery data comprises said subset of said band data components.

Claims 4 and 5 (Canceled).

Claim 6 (Original): A method according to claim 1, in which said subset of said band data components is a predetermined subset of said band data components.

Claim 7 (Original): A method according to claim 1, in which said recovery data defines which of said band data components are in said subset of said band data components.

Claim 8 (Previously Presented): A method according to claim 1, further comprising:
detecting which of said band data components of said watermark signal are most significant over at least a portion of said watermark signal, said most significant band data components forming said subset of said band data components.

Claim 9 (Previously Presented): A method according to claim 8, in which said detecting further comprises:

detecting which of said band data components of said watermark signal are most significant over the entirety of said watermark signal.

Claim 10 (Previously Presented): A method according to claim 8, in which said watermark signal and said digital audio signal are each encoded as successive data frames representing respective time periods of said watermark signal and said digital audio signal, and said detecting further comprises:

detecting which of said band data components of said watermark signal are most significant over a group of one or more of said data frames of said watermark signal, said most significant band data components forming said subset of said band data components in respect of a corresponding group of one or more frames of said digital audio signal.

Claim 11 (Previously Presented): A method according to claim 1, further comprising:

detecting which of said band data components of said watermark signal are most significant over at least a portion of said watermark signal, said most significant band data components forming said subset of said band data components.

Claim 12 (Previously Presented): A method according to claim 11, in which said detecting further comprises:

detecting which of said band data components of said watermark signal are most significant over the entirety of said watermark signal.

Claim 13 (Previously Presented): A method according to claim 11, in which said watermark signal and said digital audio signal are each encoded as successive data frames representing respective time periods of said watermark signal and said digital audio signal, and said detecting further comprises:

detecting which of said band data components of said watermark signal are most significant over a group of one or more of said data frames of said watermark signal, said most significant band data components forming said subset of said band data components in respect of a corresponding group of one or more frames of said digital audio signal.

Claim 14 (Previously Presented): A method according to claim 1, further comprising:

detecting which of said band data components of said watermark signal differ most significantly from corresponding band data components of said digital audio signal over at least corresponding portions of said watermark signal and said digital audio signal, said most significantly differing band data components forming said subset of said band data components.

Claim 15 (Previously Presented): A method according to claim 1, further comprising:

detecting which of said band data components of said watermark signal differ most significantly from corresponding band data components of said digital audio signal over at least corresponding portions of said watermark signal and said digital audio signal, said most significantly differing band data components forming said subset of said band data components.

Claim 16 (Original): A method according to claim 7, in which said band data components forming said subset of said band data components are defined by a pseudo-random function.

Claim 17 (Original): A method according to claim 1, in which said digital audio signal is stored in a data format having at least:

format-defining data specifying a quantity of data available to store said digital audio signal;

said band data components; and

zero or more ancillary data space.

Claim 18 (Previously Presented): A method according to claim 17, further comprising storing said recovery data in said ancillary data space.

Claim 19 (Previously Presented): A method according to claim 17, further comprising altering said format-defining data to specify a larger quantity of data to store said digital audio signal, thereby increasing the size of said ancillary data space.

Claim 20 (Previously Presented): A method according to claim 1, further comprising appending said recovery data to said band-altered digital audio signal.

Claim 21 (Previously Presented): A method according to claim 1, further comprising adjusting the number of said band data components in said subset of said band data components in accordance with the data capacity available for said recovery data.

Claim 22 (Currently Amended): A method of processing a spectrally-encoded digital audio signal comprising band data components representing audio contributions in respective frequency bands and recovery data representing original values of a subset of said band data components, said method comprising:

altering said subset of said band data components in accordance with said recovery data to reconstruct said original values of said subset of said band data components, wherein said subset of said band data components include band data components from a spectrally-encoded digital audio watermark signal, multiplied by a scaling factor; and
storing results of the altering in a physical memory unit.

Claim 23 (Previously Presented): A method according to claim 22, further comprising:

decrypting said recovery data.

Claim 24 (Previously Presented): A method of distributing spectrally-encoded audio content material, said method comprising:

processing said spectrally-encoded audio content material in accordance with the method of claim 1 to form a band-altered digital signal and recovery data;

encrypting said recovery data to form encrypted recovery data;
supplying said band-altered digital signal and said encrypted recovery data to a receiving user; and
supplying a decryption key, to said receiving user to allow said receiving user to decrypt said encrypted recovery data.

Claim 25 (Previously Presented): A method according to claim 24, wherein said supplying takes place only if a payment is received from said receiving user.

Claim 26 (Currently Amended): A method of receiving spectrally-encoded audio content material, said method comprising:

receiving a band-altered digital signal and encrypted recovery data from a content provider, said band-altered digital signal and said recovery data having been generated by combining or replacing one or more band data components with corresponding band data components from a spectrally-encoded digital audio watermark signal, multiplied by a scaling factor to produce a band-altered digital audio signal having altered band data components;

storing said band-altered digital signal in a physical memory unit;

generating recovery data to allow original values of said altered band data components to be reconstructed;

receiving a decryption key to allow decryption of said encrypted recovery data;

decrypting said encrypted recovery data to form decrypted recovery data;

processing said band-altered digital signal by altering said subset of said band data components in accordance with said recovery data to reconstruct said original values of said subset of said band data components; and

reproducing audio content based on the reconstructed original values of said subset of said band data components.

Claim 27 (Previously Presented): A method according to claim 26, further comprising:

providing a payment to said content provider.

Claim 28 (Currently Amended): A computer readable storage medium containing program instructions for execution on a computer, which when executed by the computer, cause the computer to perform the method recited in claim 1.

Claims 29-31 (Canceled).

Claim 32 (Currently Amended): A computer readable storage medium containing program instructions for execution on a computer, which when executed by the computer, cause the computer to perform the method recited in claim 22.

Claims 33-35 (Canceled).

Claim 36 (Previously Presented): An apparatus for processing a spectrally-encoded digital audio signal comprising band data components representing audio contributions in respective frequency bands, said apparatus comprising:

a data modifier configured to modify a subset comprising one or more of said band data components by combining or replacing one or more of said band data components with corresponding band data components from a spectrally-encoded digital audio watermark

signal, multiplied by a scaling factor, to produce a band-altered digital audio signal having altered band data components;

a data generator for generating recovery data to allow the original values of said subset of said band data components to be reconstructed; and

a memory unit being configured to store the output of the data modifier.

Claim 37 (Previously Presented): The apparatus according to claim 36, further comprising an encryption unit configured to encrypt said recovery data.

Claim 38 (Previously Presented): An apparatus for processing a spectrally-encoded digital audio signal comprising band data components representing audio contributions in respective frequency bands and recovery data representing original values of a subset of said band data components, said apparatus comprising:

a data modifier configured to modify said subset of said band data components in accordance with said recovery data to reconstruct said original values of said subset of said band data components, wherein said subset of said band data components include band data components from a spectrally-encoded digital audio watermark signal, multiplied by a scaling factor; and

a memory unit being configured to store the output of the data modifier.

Claim 39 (Previously Presented): The apparatus according to claim 38, further comprising a decryption unit configured to decrypt said recovery data.

Claim 40 (Previously Presented): A set-top box comprising the apparatus according to claim 38.

Claim 41 (Previously Presented): An audio receiver comprising the apparatus according to claim 38.

Claim 42 (Canceled).